WHAT IS CLAIMED IS:

1. A manufacturing method for a semiconductor laser device in which a semiconductor laser chip is mounted on a base portion by using an electrically conductive die-bond paste using a metal, the method comprising the step of:

applying the conductive die-bond paste onto the base portion;

mounting the semiconductor laser chip onto the base portion on which the conductive die-bond paste has been applied;

heating the semiconductor laser chip mounted on the base portion while the semiconductor laser chip is kept pressurized toward the base portion, thereby temporarily curing the conductive die-bond paste; and

after the temporary curing, finally curing the conductive die-bond paste.

2. A semiconductor laser device comprising a semiconductor laser chip mounted on a base portion by using an electrically conductive die-bond paste using a metal, wherein

thermal resistance of the semiconductor laser device is 90°C/W or lower.

3. The semiconductor laser device according to Claim 2, wherein

creep-up height of the conductive die-bond paste at a side face of the semiconductor laser chip from a die-bond surface of the semiconductor laser chip is not more than 40 μm.

4. The semiconductor laser device according to Claim 2, wherein

the conductive die-bond paste interposed between a die-bond surface of the semiconductor laser chip and the base portion is 5 μm or lower thick.

5. The semiconductor laser device according to Claim 2, wherein

the conductive die-bond paste using a metal is silver paste.